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U. S. DEPARTMENT OF AGRICULTURE,

BUREAU OF ANIMAL INDUSTRY.—CIRCULAR No. 99.

A. D. MELVIN, CHIEF OF BUREAU.

OFFICIALS, ASSOCIATIONS, AND EDUCATIONAL INSTITUTIONS CONNECTED WITH THE DAIRY INTERESTS OF THE UNITED STATES FOR THE YEAR 1906.

WASHINGTON, D. C., *September 1, 1906.*

The accompanying lists, compiled by the Dairy Division, contain the names and addresses of all the principal officials connected with this industry and exhibit the facilities offered in the several States for technical dairy instruction.

A. D. MELVIN, *Chief of Bureau.*

Approved:

JAMES WILSON,

Secretary of Agriculture.

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UNITED STATES DEPARTMENT OF AGRICULTURE.

JAMES WILSON, *Secretary.*

W. M. HAYS, *Assistant Secretary.*

BUREAU OF ANIMAL INDUSTRY.

A. D. MELVIN, *Chief.*

A. M. FARRINGTON, *Assistant Chief.*

DAIRY DIVISION.

ADMINISTRATION.

ED. H. WEBSTER, *Chief.*

C. B. LANE, *Assistant Chief.*

WM. HART DEXTER, *Assistant.*

SCIENTIFIC STAFF.

Butter investigations: C. E. Gray, chemist, in charge; C. W. Fryhofer, assistant; E. A. McDonald, W. S. Smarzo, W. J. Credicott, market inspectors.

Market milk investigations: C. B. Lane, assistant chief, in charge; R. H. Shaw, chemist; George M. Whitaker, Ellis M. Santee, Ivan C. Weld, assistants.

Cheese investigations: C. F. Doane, expert, in charge. American varieties: John L. Sammis, chemist; Jay W. Moore, expert maker. European varieties: Charles Thom, mycologist; Arthur W. Dox, chemist; T. W. Issajeff, expert maker.

Southern dairy investigations: B. H. Rawl, expert, in charge; H. N. Slater, Duncan Stuart, J. A. Conover, S. E. Barnes, J. W. Ridgeway, J. E. Dorman, assistants.

Building and management investigations: B. D. White, expert, in charge; G. H. Parks, architect; W. J. Latimer, Joseph A. Lockie, assistants.

Dairy laboratories: L. A. Rogers, bacteriological chemist, in charge.

INSPECTION STAFF.

Renovated-butter factories: M. W. Lang, 510 Northwestern Building, Chicago, Ill., in charge.

Renovated-butter markets: Levi Wells, Laceyville, Pa., in charge.

Inspectors: Robert McAdam, 510 Northwestern Building, Chicago, Ill.; George M. Whitaker, Washington, D. C.; E. A. McDonald, Seattle, Wash.

Deputy inspectors: S. B. Willis, Boston, Mass.; R. A. McBride, J. H. Barrett, 6 Harrison street, New York, N. Y.; H. P. Olsen, St. Paul, Minn.

STATE DAIRY OFFICIALS.

The State laws under which the dairy commissioners' and dairy and food commissioners' offices are created, and those especially relating to dairy matters, were compiled and published by the Dairy Division in 1898 and in 1900. Many laws for the protection of dairy products, passed by State legislatures, are inoperative. In some cases courts have failed to sustain the statutes; in others the non-enforcement is due to neglect to provide the necessary special officers and funds. The cost of enforcing the laws referred to varies greatly in the different States. This information can not be exactly obtained, as it is the custom to make but one appropriation for dairy and other food work, and expenditures for the former are not kept separately. In some cases the amounts used in the interest of pure dairy products reach \$10,000 per year, and this amount is far exceeded in two or three States. The salary of the executive officer rarely exceeds \$2,000.

The following is a list of the commissioners and other principal officers:

CALIFORNIA. Secretary and chemist of the State dairy bureau, William H. Saylor, 95 Market street, San Francisco.

COLORADO. State dairy commissioner, Mrs. Mary Wright, Denver. Deputy commissioner, Miss Belle P. Gill, Denver.

- CONNECTICUT. Dairy commissioner, J. B. Noble, Hartford. Deputy commissioner, R. O. Eaton, Montowese.
- IDAHO. State dairy, pure food, and oil commissioner, A. F. Hitt, Boise.
- ILLINOIS. State food commissioner, Alfred H. Jones, room 1623 Manhattan Building, Chicago. Assistant commissioner, H. E. Schuknecht, room 1623 Manhattan Building.
- INDIANA. State inspector of food and drugs, J. N. Hurty (State health officer), Indianapolis. H. E. Barnard, chemist and assistant inspector.
- IOWA. Food and dairy commissioner, H. R. Wright, Des Moines. Deputy commissioner, W. E. Smith, Des Moines. Assistant dairy commissioners, W. B. Johnson, Des Moines, F. L. Odell, Des Moines.
- MASSACHUSETTS. Executive officer of the dairy bureau, the secretary of the State board of agriculture. General agent State dairy bureau, P. M. Harwood, 136 State House, Boston.
- MICHIGAN. Dairy and food commissioner, A. C. Bird, Lansing. Deputy commissioner, Colon C. Lillie, Coopersville.
- MINNESOTA. State dairy and food commissioner, Edward K. Slater, St. Paul. Assistant commissioner, M. G. Trenham, Alexandria.
- MISSOURI. State dairy commissioner, Robert M. Washburn, Columbia. Deputy commissioner, D. J. Clifford.
- NEBRASKA. Food commissioner, the governor of the State. Deputy commissioner, E. L. Redfern, Lincoln.
- NEW JERSEY. Chief inspector of food and drugs, George W. McGuire, Trenton.
- NEW YORK. Commissioner of the department of agriculture (including dairy), Charles A. Wieting, Albany. Assistant commissioners, G. L. Flanders, Albany; Henry H. Kracke, acting assistant commissioner, No. 23 Park Row, New York City; S. Brown Richardson, Lowville; Ebenezer J. Preston, Amenia; C. E. Sackett, 144 Arcade Building, Utica; C. T. Russell, Munnsville; Verlett C. Beebe, Arcade; W. T. Hughes, room 221 Powers Block, Rochester; J. H. Grant, 715 Mutual Life Building, Buffalo; Charles P. Clark, Falconer.
- NORTH DAKOTA. Ex-officio State dairy commissioner, W. C. Gilbreath, Bismarck, State commissioner of agriculture and labor. Deputy, H. J. Gibson, Bismarck. Assistant dairy commissioner, R. F. Flint, Bismarck.
- OHIO. Dairy and food commissioner, Horace Ankeney, Columbus. Assistant commissioners, J. J. Kinney, Cincinnati; George Demuth, Toledo.
- OREGON. Dairy and food commissioner, J. W. Bailey, room 19 Breeden Building, Portland. Assistant commissioner, H. V. Tartar.
- PENNSYLVANIA. Dairy and food commissioner of the department of agriculture, Dr. B. H. Warren, Harrisburg. Assistant commissioner, Oliver D. Schock, Harrisburg.
- SOUTH DAKOTA. Food and dairy commissioner, E. W. Smail, Webster. Assistant commissioner, J. W. Arthur, Webster.
- UTAH. Dairy and food commissioner, John Peterson, Salt Lake City. Assistant commissioner, Herman Harms, Salt Lake City.
- WASHINGTON. State dairy and food commissioner, L. Davies, Davenport. Deputy, L. W. Hanson, 407 Washington Building, Seattle.
- WISCONSIN. Dairy and food commissioner, J. Q. Emery, Madison. Assistant commissioner, U. S. Baer, Madison; Second assistant, James G. Moore, Madison.

DAIRY ASSOCIATIONS.

The chief work of dairy associations is educational, but they also take an interest in all matters pertaining to the industry, especially legislation and the enforcement of dairy laws.

Most of the organizations named below publish the proceedings of their annual meetings. These are usually issued separately, but are sometimes included with the reports of the State departments of agriculture. It is now difficult to obtain full sets of reports of the older associations which embrace much dairy information of a valuable and practical character. The same is true of reports of the American Dairymen's Association (1866-1880) and the Northwestern Dairymen's Association (1867-1883), which were disbanded when their fields of operation had become occupied by the younger associations in the several States.

A considerable part of the expense of holding conventions and publishing reports is met by membership fees, which are generally \$1 a year, and by special subscriptions of private individuals, firms, and towns where the meetings are held; also by receipts from advertisements inserted in the official programs. But in most States the expense is largely defrayed by annual grants of the legislatures. From this source the Wisconsin Dairymen's Association receives \$4,000, the Minnesota Dairymen's Association \$2,000, the Illinois State Dairymen's Association \$1,500, the Connecticut Dairymen's Association \$1,500, the associations in Vermont and Nebraska \$1,000 each, Ohio (1905) \$800, New Hampshire Granite State Dairymen's Association \$700, the Wisconsin Cheese Makers' Association receives \$600, the Southern Wisconsin Cheese Makers' Association \$500 to \$1,000, the Indiana and Maine dairy associations, the Wisconsin Butter Makers' Association, and the Illinois Milk Producers' Institute receive \$500 each, the Michigan Dairymen's Association receives \$300 and the expense of printing the annual reports, the Minnesota State Butter and Cheese Makers' Association receives \$275, the Dairy Union of Pennsylvania about \$200, the Georgia Association \$50. The California Creamery Operators' Association averages about \$200 per annum, donations from merchants and factories; the Indiana State Dairy Association receives \$150 from creamery supply houses; the Iowa State Dairy Association receives in contributions about \$1,000; the New York State Dairy Association receives \$400 from the city or town where the annual meeting of the Association is held. In Iowa the expense of printing and distributing the proceedings of the annual meetings of the State association is borne by the State, in New York and Pennsylvania a part of the expenses of the speakers and the annual meeting are paid by the State, and in Maine some assistance is received thru the State commissioner of agriculture.

Prizes consisting of money and articles useful in the dairy are frequently offered by the supply trade and others for the best packages of butter and cheese exhibited at the meetings.

Following is a list of all dairy associations whose interests cover any considerable part of a State or larger territory:

National Association of Dairy Instructors and Investigators. Organized 1906.

Membership, the dairy instructors and investigators of the United States. President, R. A. Pearson, Cornell University, Ithaca, N. Y. Secretary-treasurer, C. B. Lane, Assistant Chief of the Dairy Division, United States Department of Agriculture. First meeting held at University of Illinois, Urbana, Ill., July 17-19, 1906.

Association of State and National Food and Dairy Departments. Organized 1896.

Membership, the dairy and food control officials of each State. President, Horace Ankeny, Columbus, Ohio. Secretary, Dr. R. M. Allen, Lexington, Ky. Next year's meeting (1907) not yet decided upon.

National Creamery Buttermakers' Association. Organized 1891. Membership, estimated, about 2,000. President, J. J. Farrell, Carver, Minn. Secretary, E. Sudendorf, Clinton, Ill. Last annual meeting, Chicago, Ill., February 19-21, 1906.

National Dairy Union.^a Organized 1898. Membership, estimated, 10,000. President, S. B. Shilling, 154 Lake street, Chicago, Ill. Secretary, Charles Y. Knight, 154 Lake street, Chicago, Ill. Last annual meeting, Chicago, Ill., February 23, 1906.

Boston Cooperative Milk Producers' Association.^a Organized 1904. Membership 1,600. President, Stanley H. Abbott, Wilton, N. H. Secretary, W. A. Hunter, 10 Florence street, Worcester, Mass. Annual meeting, Boston, third Tuesday in January each year.

^aIncorporated.

- Five States Milk Producers' Association.** Organized 1898. Membership about 2,500. President, Ira L. Snell, Kenwood, N. Y. Secretary, H. T. Coon, Homer, N. Y. Annual meeting, Binghamton, N. Y., October 18, 1906.
- CALIFORNIA.** *California Creamery Operators' Association.* Organized 1900. Membership 200. President, J. H. Severin, Modesto. Secretary, W. H. Roussel, 119 California street, San Francisco. Annual meeting, Stockton, December, 1906.
- CONNECTICUT.** *Connecticut Dairymen's Association.*^a Organized 1882. Membership 352. President, H. O. Daniels, Box 646, Middletown. Secretary, J. G. Schwink, jr., Meriden. Annual meeting, Hartford, third week in January, 1907. *Connecticut Creamery Association.* Organized 1890. Membership 17. President E. A. Russell, Suffield. Secretary, E. B. Little, Somers. Annual meeting, Hartford, second Wednesday in January, 1907.
- GEORGIA.** *Georgia Dairy and Live Stock Association.*^b Reorganized 1905. Membership 75. President, G. C. Dillon, Macon. Secretary, C. L. Willoughby, Experiment. Annual meeting, Macon, October 4 and 5, 1906.
- IDAHO.** *State Dairy Association.* Organized 1899. Membership about 25. President, H. T. French, Moscow. Secretary, A. E. Gipson, Caldwell. Annual meeting, January, 1907.
- ILLINOIS.** *Illinois Dairymen's Association.* Organized 1874. Membership 275. President, L. N. Wiggins, Springfield. Secretary, George Caven, 154 Lake street, Chicago. Last annual meeting, Effingham, January 16-18, 1906. *Chicago Milk Shippers' Union.*^a Organized 1896. Membership 500. President, Hiram Holcomb, Sycamore. Secretary, H. B. Farmer, 184 La Salle street, Chicago. General meeting, Chicago, last Monday in February, 1907. *Illinois Milk Producers' Institute.*^a Organized 1905. Membership, estimated, 500. President, D. D. Hunt, De Kalb. Secretary, J. M. MacVean, 184 La Salle street, Chicago. Annual meeting, place and date not yet announced.
- INDIANA.** *Indiana State Dairy Association.* Organized 1891. Membership 130. President, D. B. Johnson, Mooresville. Secretary, H. J. Fidler, Purdue University, Lafayette. Annual meeting, Indianapolis, January 23 and 24, 1907. *Southern Indiana Dairy and Cooperative Creamery Association.*^c Organized 1906. Membership 124. President, John Mingle, St. Philips. Secretary, George Smith, Haubstadt.
- IOWA.** *Iowa State Dairy Association.*^a Organized 1876. Membership about 500. President, S. B. Shilling, Mason City. Secretary, W. B. Johnson, Des Moines. Annual meeting, Cedar Rapids, November 7-9, 1906.
- KANSAS.** *Kansas State Dairy Association.* Organized 1888. Membership 300. President, H. Vanleeuwen, Ottawa. Secretary, I. D. Graham, of the Kansas Farmer, Topeka; assistant secretary, H. A. Heath, Topeka. Annual meeting, State Agricultural College, Manhattan, probably December 19, 1906.
- MAINE.** *Maine Dairymen's Association.* Organized 1898. Membership 50. President, F. S. Adams, Bowdoinham. Secretary, L. W. Dyer, Woodfords. Last annual meeting, Pittsfield, December 14 and 15, 1905.
- MASSACHUSETTS.** *Massachusetts Creamery Association.* Organized 1895. Membership 50. President, Watson H. Wright, Easthampton. Secretary, A. M. Lyman, Montague. Annual meeting, Northampton, December 19 and 20, 1906.
- MICHIGAN.** *Michigan Dairymen's Association.*^a Organized 1885. Membership 375. President, Colon C. Lillie, Coopersville. Secretary, S. J. Wilson, Flint. Annual meeting, Saginaw, February 13-15, 1907. *Grand Traverse Dairymen's Association.* Organized 1901. Membership 95. President, G. H. Robertson, Traverse City. Secretary, D. H. McMullen, R. F. D. No. 1, Traverse City. Last annual meeting, Traverse City, March 28 and 29, 1906.

^a Incorporated.

^b Enlargement of Georgia Dairymen's Association, organized 1894, and Georgia Live Stock Breeders' Association, 1903.

^c Holds monthly meetings thruout southern Indiana.

- MINNESOTA.** *Minnesota State Dairymen's Association.*^a Organized 1877. Membership 204. President, L. A. Sweet, Fairmont. Secretary, J. R. Morley, Owatonna. Last annual meeting, Mankato, December 12-14, 1905. *Minnesota State Butter and Cheese Makers' Association.*^a Organized 1894. Membership about 400. President, James Sorenson, Maple Plain. Secretary, E. L. Allen, 393 Selby avenue, St. Paul. Annual meeting, Minneapolis, October 31 and November 1, 1906.
- MISSOURI.** *Missouri State Dairy Association.* Organized 1890. Membership 262. President, George C. Mosher, Bryant Building, Kansas City. Secretary, R. M. Washburn, Columbia. Annual meeting, Columbia, second week in January, 1907.
- NEBRASKA.** *Nebraska Dairymen's Association.* Organized 1885. Membership 245. President, H. C. Glissman, Sta. B., Omaha. Secretary, S. C. Bassett, Gibbon. Annual meeting, Lincoln, January, 1907 (exact date not given).
- NEW HAMPSHIRE.** *Granite State Dairymen's Association.*^a Organized 1884. Membership 75. President, W. H. Caldwell, Peterboro. Secretary, Ivan C. Weld, Durham. Last annual meeting, Lisbon, December 7 and 8, 1905.
- NEW YORK.** *New York State Dairymen's Association.*^a Organized 1877. Membership about 400. President, M. T. Morgan, West Winfield. Secretary, T. E. Tiquin, Sherburne. Assistant Secretary, Jared Van Wagenen, jr., Lawyerville. Annual meeting, Elmira, December 11-14, 1906.
- NORTH DAKOTA.** *North Dakota Dairymen's Association.* Organized 1891. President, Peter Miller, Ellendale. Secretary, E. E. Kaufman, Fargo. Annual meeting, Bismarck, February, 1907.
- OHIO.** *Ohio State Dairymen's Association.* Organized 1894. Membership 150. President, John D. Nichols, Cleveland. Secretary, E. H. Campbell, Salem. Last annual meeting, Dayton, January 24-26, 1906.
- OKLAHOMA.** *Oklahoma Dairy Association.* Organized 1904. Membership 18. Vice-President, F. Filber, El Reno. Secretary, Frank D. Northup, Oklahoma City. Last annual meeting, Guthrie, February 19, 1905.
- OREGON.** *Oregon Dairymen's Association.* Organized 1892. Membership 50. President, Harry West, Scappoose. Secretary, F. L. Kent, Corvallis. Annual meeting, Ashland, December 11 and 12, 1906.
- PENNSYLVANIA.** *Pennsylvania Dairy Union.* Organized 1898. Membership 200. President, H. E. Van Norman, State College. Secretary, W. E. Perham, Niagara. Annual meeting, Harrisburg, about January 24 and 25, 1907. *Creamery Association of Eastern Pennsylvania and vicinity.* Reorganized 1896. Membership 100. President, John I. Carter, Chatham. Secretary, George R. Meloney, 1937 Market street, Philadelphia. Annual meeting, Philadelphia, first Saturday in January, 1907.
- SOUTH CAROLINA.** *South Carolina Live Stock Association (includes dairying).* Organized 1902. Membership 95. President, B. Harris, Pendleton. Vice-Presidents, John G. Mobly, in charge of dairy cattle department, Winnsboro; C. G. Voigt, in charge of dairy manufacturing department, Easley. Secretary, B. H. Rawl, Washington, D. C. Annual meeting, Columbia, February, 1907 (exact date not fixed).
- SOUTH DAKOTA.** *South Dakota Dairymen's and Butter Makers' Association.* Reorganized 1906. Membership 60. President, George A. Crooks, Crooks. Secretary, Albert Andersen, Savo. Annual meeting, Redfield, October 24-26, 1906.
- TEXAS.** *State Dairy and Feeders' Association.* Organized 1897. Membership 18. President, W. R. Spann, Dallas. Secretary, G. E. Adams, Roundrock. Annual meeting, Agricultural and Mechanical College, College Station, January, 1907.

^a Incorporated.

- UTAH. *Utah Dairymen's Association*. Organized 1894. Membership 75. President, Lorenzo Hanson, Logan. Secretary, Prof. R. W. Clark, Logan. Last annual meeting, Richmond, October 5-7, 1905.
- VERMONT. *Vermont Dairymen's Association*. Organized 1869. Membership 560. President, D. H. Morse, Randolph. Secretary, F. L. Davis, North Pomfret. Annual meeting, January 8-10, 1907.
- WASHINGTON. *Washington State Dairymen's Association*. Organized 1894. Membership 100. President, D. S. Tracy, Chimacum. Secretary, Ira P. Whitney, Pullman. Annual meeting, Spokane, second week in December, 1906.
- WEST VIRGINIA. *West Virginia State Dairy Association*. Organized 1904. Membership 40. President, B. F. Mann, Fort Spring. Secretary, W. K. Brainerd, Morgantown. Annual meeting, Charles Town, January 22, 1907.
- WISCONSIN. *Wisconsin Dairymen's Association*. Organized 1872. Membership 200. President, W. J. Gillett, Rosendale. Secretary, George W. Burchard, Fort Atkinson. Last annual meeting, Waukesha, January 31-February 2, 1906. *Wisconsin Cheese Makers' Association*.^a Organized 1893. Membership 450. President, E. L. Aderhold, Neenah. Secretary, U. S. Baer, Madison. Annual meeting, Milwaukee, January, 1907. *Southern Wisconsin Cheese Makers' Association*. Organized 1901. Membership 97. President, John Luchsinger, Monroe. Secretary, Henry Elmer, box 623, Monroe. Last annual meeting, Darlington, March 7 and 8, 1906. *Wisconsin Buttermakers' Association*.^a Organized 1901. Membership 420. President, M. Michels, Garnet. Secretary, J. G. Moore, Madison. Annual meeting, Wausau, February 5-8, 1907.

DAIRY INSTRUCTION.

In the prominent dairy States, and in several others, the State agricultural colleges and some other institutions conduct dairy schools in which they offer short courses in the different branches of dairying. Instruction continues a few weeks, and is given by lectures, laboratory practise, and work in the dairy. It includes the principles of breeding and feeding of dairy cattle, practical exercise in testing milk, and the manufacture and care of dairy products; in some cases, also, the pasteurization of milk and a brief study of dairy bacteriology. There are few entrance requirements.

All of the instruction given in the short courses is offered to the students taking longer dairy courses and the full college courses in agriculture, and these have opportunity to pursue advanced work and to specialize along lines in which they are most interested.

As a rule all the work in the creamery and cheese factory short courses bears directly upon these industries, while in the farm-dairy courses subjects less closely related to dairying are usually taken.

The names of the institutions at which instruction in dairying is given, the kind and amount of the work, as well as the season when offered, together with the names and addresses of instructors in charge, to whom requests for further information may be sent, are stated below:

ALABAMA. *Alabama Polytechnic Institute*.

College course; dairying, sophomore year, fall and winter terms, two hours' lectures and three hours' practise per week.

Two-year course; dairying, with sophomore class, two hours' lectures and four hours' practise per week.

One-year course; dairying, with sophomore class, two hours' lectures and four hours' practise per week.

Address: Prof. J. F. Duggar, Auburn.

Agricultural and Mechanical College for Negroes.

Dairy school; first, second, and third year, normal. Theory each day for one hour, practise two days in each week.

Address: Prof. E. P. Patterson, Normal.

Tuskegee Normal and Industrial Institute.

Regular course; farm dairying, two years; two lectures and two practise periods per week.

Address: Prof. George W. Carver, Tuskegee.

CALIFORNIA. *University of California.*

Dairy school; creamery and cheese making, fall, four to eight weeks.

College course; junior year, second half, dairying, one hour lecture and three 3-hour practise periods per week.

Two-year course; second year, first half, dairying, one lecture and eight hours' practise per week.

Address: Prof. E. W. Major, Berkeley.

California Polytechnic School.

Regular course; dairying, second year, two lectures and six practise periods per week. It includes thirteen weeks of milk testing and dairy chemistry, twelve weeks butter making, and eleven weeks cheese making. Third year advanced courses, elective.

Address: Prof. Leroy Anderson, San Luis Obispo.

COLORADO. *State Agricultural College.*

College course; dairying, junior year, spring term, four hours' lectures and ten hours' practise per week, exclusive of feed and management of dairy cattle.

Address: W. L. Carlyle, Fort Collins.

CONNECTICUT. *Agricultural College.*

Dairy school; two courses, creamery and farm dairy, winter, twelve weeks.

College course; dairying, senior year, five hours' lectures and nine hours' practise per week.

Address: Prof. C. L. Beach, Storrs.

DELAWARE. *Delaware College.*

College course; dairying, senior year, thirty lectures, thirty hours' laboratory work.

Short course; farm dairying, ten weeks, two lectures and one laboratory period per week.

Address: Prof. J. A. Foord, Newark. (Report of 1905.)

FLORIDA. *University of Florida.*

College course; junior year, second term, lectures three hours, practise three hours per week.

Address: Hon. Andrew Sledd, President, Lake City.

State Normal and Industrial School.

Special course; farm dairying, eight weeks, two hours per week for theory, one hour per week for practise.

Address: Prof. C. D. Menafee, Tallahassee.

GEORGIA. *State College of Agriculture and Mechanic Arts.*

College course; dairying, senior year, two terms.

Short course; dairying and veterinary science, six weeks, ten hours per week.

Address: Prof. J. M. Johnson, Athens. (Report of 1905.)

IDAHO. *College of Agriculture, State University.*

College course; dairying, junior year, seventeen weeks, two hours' theory, and two hours' practise per week.

Short course; farm dairying, winter, three weeks.

Address: Prof. H. T. French, Moscow.

ILLINOIS. *College of Agriculture, University of Illinois.*

Department of dairy husbandry; dairying, three hours per week, one-half year is required; elective, one full year. Electives: Farm dairying, creamery, and cheese-factory management, butter, cheese, commercial milk, pasteurizing, standardizing, dairy bacteriology, original dairy investigation, etc. (Total electives equal to eighteen hours per week for one year.)

Short courses; four weeks each in creamery work and city milk supply.

Address: Prof. Wilber J. Fraser, Urbana.

INDIANA. *School of Agriculture, Purdue University.*

Dairy school; creamery, farm dairy, winter, ten weeks.

College course; dairying, freshman year, second half, seven hours per week; junior and senior years, elective, six hours per week for two years.

Two-year course; dairying, freshman year, second half, seven hours per week.

Short courses; (1) starters, cream ripening and butter scoring, ten days; (2) for adults, farm butter making and milk testing, ten days. Ten days' course to milkmaids of Indiana, middle of November, nine weeks' course from January 16 to March 17.

Address: Prof. O. F. Hunziker, Lafayette.

IOWA. *State College of Agriculture and Mechanic Arts.*

Dairy school; two courses; cheese making, fall, sixteen weeks; butter making, spring, twenty weeks.

College course; four-year course in dairy husbandry, special dairying subjects, sophomore year, averaging six hours per week; junior year, four hours per week; senior year, seven hours per week.

Short courses; (1) two weeks' winter course for experienced butter makers only, churning, cream ripening, starters, pasteurizing, and testing; (2) two weeks, winter, farmers' course in farm dairying, including butter making, testing, hand separators, etc.

Address: Prof. G. L. McKay, Ames.

KANSAS. *State Agricultural College.*

Dairy school; two courses, creamery and farm dairy, each twelve weeks, winter.

College course; dairying, sophomore year, twelve weeks, two and one-half hours' lectures, ten hours laboratory work per week; senior year, elective, twenty hours.

Address: Prof. Oscar Erf, Manhattan.

KENTUCKY. *Agricultural and Mechanical College of Kentucky.*

College course; dairying, junior year, winter term, three hours lectures, four hours practise, per week.

Short-course students have text-book work and laboratory practise about same as indicated above for long-course students.

Address: Prof. J. J. Hooper, Lexington.

Normal and Industrial Institute for Colored Persons.

Regular course; dairying, theory and practise, two hours per day for nine months.

Address: President James S. Hathaway, Frankfort. (Report of 1905.)

LOUISIANA. *State University and Agricultural and Mechanical College.*

College course; dairying, fourth year, first semester, three hours' lectures and two hours' practise per week.

Short course; dairying, second year, first semester, three hours' lectures and two hours' practise per week.

Winter course (ten weeks); dairying, nine lectures, six hours' practise.

Address: Prof. B. C. Pittuck, Baton Rouge. (Report of 1905.)

Southern University and Agricultural and Mechanical College.

College course; dairying, two years.

Address: Prof. Charles E. Roos, Soniat and Magazine streets, New Orleans.

MAINE. *University of Maine.*

Dairy school; eight weeks, two lectures and four hours' practise per day, for four weeks.

College course; dairying, junior year, spring term, eighteen hours' lectures, sixty hours' practise; senior year elective.

MAINE. *University of Maine—Continued.*

School course in agriculture; two years' course, one hour per day, lectures thruout the year, and seven hours per week laboratory work for eight weeks.

MARYLAND. *Agricultural College.*

College course; dairying, junior year, third term, ten weeks, three hours' practise per week.

Two-year course; dairying, third term, two hours' lectures, three hours' practise per week.

Short course; winter, ten weeks.

Address: Prof. C. W. Melick, College Park.

MASSACHUSETTS. *Agricultural College.*

College course; sophomore year, thirty-two hours' lectures; senior year, elective, twenty-eight hours' lectures, sixty hours' practise.

Short course; dairy farm management, creamery and farm dairy, winter, ten weeks.

Address: Prof. William P. Brooks, Amherst.

MICHIGAN. *State Agricultural College.*

Dairy school; three winter courses; creamery eight weeks; cheese making, four weeks; dairy husbandry, eight weeks.

College course; dairying sophomore year, twelve weeks, twenty-four hours' lectures and forty-eight hours' practise. Women's course, elective, twelve weeks, twenty-four hours' lectures, forty-eight hours' practise. Senior year, elective, pasteurization, dairy experimentation, detection of adulteration, advanced butter and cheese making, sixty hours' theory, two hundred and seventy hours' practise.

Address: Prof. C. D. Smith, Agricultural College.

MINNESOTA. *College of Agriculture, University of Minnesota.*

Dairy school; creamery, farm dairy, cheese making, winter, four weeks.

College course; one and one-half years' class work, one year's practise.

Short course; six weeks' practise in judging and lectures on dairy husbandry.

Address: Prof. T. L. Haecker, St. Anthony Park.

MISSISSIPPI. *Agricultural and Mechanical College.*

College course; dairying, freshman year, one term, two hours per week; sophomore year, one term, five hours per week lectures, two hours' practise; junior year, one term, nine hours per week (one-half lectures, one-half practise); senior year, one term, nine hours per week (one-half lectures, one-half practise).

Address: Prof. J. S. Moore, Agricultural College (Report of 1905).

Alcorn Agricultural and Mechanical College.

Regular course; farm dairying, fourteen weeks.

Address: Prof. J. M. Hicks, Westside. (Report of 1905.)

MISSOURI. *College of Agriculture and Mechanic Arts, University of Missouri.*

College course; dairying freshman year, one term, thirty-four hours' lectures, fifty hours' practise; can elect sixty-eight hours' lectures and one hundred and two hours each in three courses, laboratory work and practise.

Short course; dairying, eighteen hours' lectures, eighteen hours' practise per week, eight weeks.

Address: Prof. C. H. Eckles, Columbia.

MONTANA. *State College of Agriculture and Mechanic Arts.*

College course; regular four years' course in dairying, theory and practise, about half and half.

Short course; dairying, winter, four and one-half months.

Address: Prof. William J. Elliott, Bozeman.

NEBRASKA. *Industrial College, University of Nebraska.*

College course; dairying, two hours' lectures, two hours' practise per week, in each course; three courses, eighteen weeks each.

Long course, school of agriculture; six months, first year, two lectures and four hours' practise per week.

Short course; dairying, winter, nine weeks; two lectures, four hours' practise per week.

Address: Prof. A. L. Haecker, Lincoln.

NEVADA. *College of Agriculture, State University.*

College course; dairying, senior year, both semesters, three hours' lectures, four hours' practise per week.

Address: Prof. N. E. Wilson, Reno.

NEW HAMPSHIRE. *College of Agriculture and Mechanic Arts.*

Dairy school; creamery, farm dairy, winter, ten weeks. Twenty hours' lectures and one hundred hours' practise.

College course; dairying, junior year, forty-five hours' lectures and one hundred and five hours' practise; senior year, three hours per week.

Address: Prof. Ivan C. Weld, Durham.

NEW MEXICO. *College of Agriculture and Mechanic Arts.*

College course; dairying, senior year, thirty-six hours' lectures, forty-eight hours' practise.

Short course; dairying thirty-six hours' lectures, forty-eight hours' practise.

Address: Prof. J. J. Vernon, Mesilla Park.

NEW YORK. *College of Agriculture, Cornell University.*

Dairy school; creamery, cheese factory, and market milk, winter, eleven weeks.

College course; dairying equal to three hours per week through two years and about the same in animal husbandry; about one-third practise.

Short course; farm dairying, winter, eleven weeks; more than half of short dairy course is practise.

Address: Prof. R. A. Pearson, Ithaca.

NORTH CAROLINA. *College of Agriculture and Mechanic Arts.*

Dairy school; creamery and farm dairy, winter, ten weeks.

College course; dairying, first year, spring term, three hours per week.

Two-year agricultural course; dairying, fall term, first year, three hours per week.

Winter course in agriculture and dairying, ten weeks.

Address: Prof. C. W. Burkett, West Raleigh.

Agricultural and Mechanical College for the Colored Race.

College course; dairying, third year, fall and winter terms; time equally divided between theory and practise.

Short course; four weeks in winter.

Address: Prof. J. H. Bluford, Greensboro.

NORTH DAKOTA. *Agricultural College.*

College course; farm dairying, senior year, sixty hours' lectures, seventy-four hours' practise.

Three-year agricultural course; sixty lectures, seventy-four hours' practise.

Short course; farm dairying, winter, ten weeks, thirty lectures, forty-eight hours' practise.

Address: Prof. J. H. Shepperd, Fargo.

OHIO. *State University.*

Dairy school; creamery, cheese factory, farm dairy, two winters, eleven weeks each.

OHIO. *State University*—Continued.

College course; dairying, one year, two lectures and three hours' practise per week; elective junior and senior year. A second year, two hours per week may be elected; laboratory and seminary through the year; household dairying, spring term, two hours per week; milk inspection, fall term, two hours per week.

Two-year course; dairying, second year, five hours per week, elective.

Address: Prof. John W. Decker, Columbus.

OKLAHOMA. *Agricultural and Mechanical College.*

College course; dairying, junior year, winter term, thirty-six hours' lectures and forty-eight hours' practise.

Two-year course; dairying, second year, fall term, twenty hours' lectures and twenty hours' practise.

Short course; dairying, eight weeks, thirty lectures, every afternoon practise.

Address: Prof. F. C. Burtis, Stillwater.

OREGON. *State Agricultural College.*

Dairy school; creamery and cheese factory, winter, six weeks.

College course; dairying, sophomore year, one-half term, five lectures per week; junior year, one term, five hours' practise per week.

Address: Prof. F. L. Kent, Corvallis.

PENNSYLVANIA. *School of Agriculture, State College.*

Dairy school; creamery and farm dairy, winter, eight weeks.

College course; dairying, in junior and senior years, fifty-one hours' lectures, and one hundred hours' practise; elective courses of one hundred and twenty-six hours' lectures, and one hundred and eighty-five hours' practise.

Short course; dairying, four weeks; total, thirty-seven hours' lectures and practise.

Special one-year course; dairying, elective.

Correspondence course; dairying, forty-seven lessons.

Address: Prof. H. E. Van Norman, State College.

RHODE ISLAND. *College of Agriculture and Mechanic Arts.*

College course; dairying, spring term, three hours per week, elective.

Address: President, Kingston.

SOUTH CAROLINA. *Clemson Agricultural College.*

College course; dairying, junior year, first term, two lectures, four hours' practise. Second term, four lectures and two hours' practise per week.

Address: John Michels, Clemson College.

Colored Normal, Industrial, Agricultural, and Mechanical College.

Regular course; junior and senior years, farm and dairy work, five hours per week.

Address: Prof. G. C. Williams, Orangeburg. (Report of 1905.)

SOUTH DAKOTA. *Agricultural College.*

Dairy school; creamery, winter, twelve weeks; cheese making, spring, twelve weeks; farm dairy, fall, twelve weeks.

College course; dairying, freshman and sophomore years, fall term.

Address: Prof. A. H. Wheaton, Brookings.

TENNESSEE. *University of Tennessee.*

Dairy school; creamery, farm dairy, cheese making, commercial milk, two weeks in January.

College course; dairying, sophomore, junior, and senior years, three hours per week.

Address: Prof. S. E. Barnes, Knoxville.

TEXAS. *Agricultural and Mechanical College.*

College course; dairying, junior year, fall term, three hours' lectures, two and one-half hours' practise per week.

Address: Prof. John A. Craig, College Station.

UTAH. *Agricultural College.*

College course; junior year, eighteen weeks dairying, two-thirds practise, three hours per week.

Three-year course; second year, first term, eighteen weeks.

Short winter course; four weeks dairying, one lecture, three hours' practise per day; for farmers and factorymen.

Address: Prof. R. W. Clark, Logan.

VERMONT. *University of Vermont and State Agricultural College.*

College course; dairying, junior year, winter, four weeks, five hours per week (two-thirds lectures, one-third practise).

Address: Prof. J. L. Hills, Burlington.

VIRGINIA. *Agricultural and Mechanical College.*

College course; dairying, two terms, one lecture, six hours' practise per week, freshman year.

Short course; one term, one lecture, six hours' practise per week.

Address: Prof. Wm. D. Saunders, Blacksburg.

Hampton Normal and Agricultural Institute.

Regular course; dairying, boys, twelve periods' lectures; girls, ten periods' lectures; both, ten periods' practise.

Special agricultural course; twenty lectures, twelve weeks' practise, three to five hours daily.

Address: Prof. W. S. Sweetser, Hampton.

WASHINGTON. *Agriculture College and School of Science.*

Dairy school; creamery and cheese factory, winter, eight weeks.

College course; farm dairying, nineteen weeks, three hours per week; dairy technique, nineteen weeks, three hours per week; milk production, nineteen weeks, two hours per week; milk inspection, nineteen weeks, one hour per week; butter and cheese scoring, nineteen weeks, one hour per week; lectures and laboratory work.

Short course; farm dairying, nineteen weeks, one hour per week.

Farmers' course; farm dairying, two weeks, lectures and practise.

Address: Prof. E. E. Elliott, Pullman.

WEST VIRGINIA. *College of Agriculture, West Virginia University.*

College course; dairying, three terms, one-third lectures, two-thirds practise.

Short course for farmers; winter, four weeks.

Address: Prof. W. K. Brainerd, Morgantown. (Report of 1905.)

West Virginia Colored Institute.

Regular course; senior year, dairying, five months, lectures and practise.

Address: Prof. A. W. Curtis, Institute.

WISCONSIN. *College of Agriculture, University of Wisconsin.*

Dairy school; creamery, cheese factory and dairying, winter, twelve weeks.

Summer dairy school; practical work with some lectures, ten weeks.

College course; dairying, one full study for junior or senior years, elective.

Short course; fourteen weeks, including lectures.

Address: Prof. E. H. Farrington, Madison.

Dunn County School of Agriculture.

Regular course; dairying, first year, winter, twelve weeks, one-fourth lectures, three-fourths practise.

Short course; dairying, winter, twelve weeks.

Address: Dr. K. C. Davis, Menomonie.

ASSOCIATIONS OF BREEDERS OF PUREBRED DAIRY ANIMALS.

The interests of the different breeds of dairy cattle are in charge of organizations of breeders which determine purity of breeding, verify pedigrees, register eligible animals, and publish herd books. Some of them record and publish sales and transfers and attested records of dairy performances. They also establish standards of excellence. The details of the work are usually left to the secretary. The names of the various associations and the addresses of the secretaries are as follows:

Ayrshire Breeders' Association.

Secretary, C. M. Winslow, Brandon, Vt.

Dutch Belted Cattle Association of America.

Secretary, H. B. Richards, Easton, Pa.

American Guernsey Cattle Club.

Secretary, Wm. H. Caldwell, Peterboro, N. H.

Holstein-Friesian Association of America.

Secretary, F. L. Houghton, Brattleboro, Vt.

American Jersey Cattle Club.

Secretary, J. J. Hemingway, 8 W. Seventeenth street, New York, N. Y.

In addition to the strictly dairy cattle named above, some breeds, primarily developed for beef production, are occasionally bred and used as dairy cattle. Their associations are as follows:

Brown Swiss Breeders' Association.

Secretary, C. D. Nixon, Owego, N. Y.

American Devon Cattle Club.

Secretary, L. P. Sisson, Newark, Ohio.

American Polled Durham Breeders' Association.

Secretary, Fletcher S. Hines, Indianapolis, Ind. P. O. Box 445.

Red Polled Cattle Club of America.

Secretary, H. A. Martin, Gotham, Wis.

American Shorthorn Breeders' Association.

Secretary, John W. Groves, 17 Exchange avenue, Union Stock Yards, Chicago, Ill.

The following breeds are of practical dairy value, altho not yet officially certified as purebred:

The American Polled Jersey Cattle Club.

Secretary, Charles S. Hatfield, Springfield, Ohio.

American Milch Goat Record Association.

Secretary, W. A. Shafor, Hamilton, Ohio.

INTERNATIONAL DAIRY FEDERATION.

(Fédération Internationale de Laiterie.)

[For the organization of the Third International Dairy Congress, to be held at The Hague in September, 1907.]

Committee of organization: President, Dr. P. S. Wijsman, Professor in University of Leyden; secretary, Dr. A. J. Swaving, Inspector to the Ministry of Agriculture, Trade, and Industry. The Hague; member for the United States, Ed. H. Webster, Chief of Dairy Division, Bureau of Animal Industry, U. S. Department of Agriculture, Washington, D. C.